Reply to Office Action of May 11, 2007

Kinter *et al.*
Appl. No. 09/836,541

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-3, 5, 6, 8, 10-14 and 21-29 are pending in the application, with 1, 5, 8, 10, 21, and 28 being the independent claims. Claims 10-14 are sought to be amended. Claims 15-20 are sought to be canceled without prejudice to or disclaimer of the subject matter therein. New claim 21-29 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 101

Paragraph 3 of the Office Action rejects claims 5, 10, 13-15, and 17-20, under 35 U.S.C. § 101 as directed to non-statutory subject matter. Claims 15 and 17-20 have been canceled, thereby rendering the rejections of these claims moot. Applicants respectfully traverse this rejection with respect to the pending claims.

Claim 5 recites "mapping each instruction of said instruction set to a corresponding PIWF configuration." Applicants respectfully assert such mapping clearly recites a physical transformation, in particular, the mapping of instructions to a different format, for example a "PIWF configuration." Moreover, there is little question the resulting instruction in the "PIWF configuration" is a tangible, concrete, and useful

result. This conclusion is compelled given one such mapped instruction is selected for decoding and execution by the processor.

Consequently, Applicants respectfully assert that not only does claim 5 recite at least one physical transformation ("mapping each instruction of said instruction set to a corresponding PIWF configuration"), but the claim produces at least one useful, concrete, and tangible result ("selecting a desired one of said PIWF configurations for decoding and execution by the processor"). Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 5 under 35 U.S.C. § 101 set forth in paragraph 3 of the Office Action.

Claim 10 recites a "tangible computer readable storage medium." Applicants respectfully assert that such a "tangible computer readable storage medium" is statutory subject matter within the scope of 35 U.S.C. § 101. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 10, and its dependent claims 13-14, under 35 U.S.C. § 101 set forth in paragraph 3 of the Office Action.

Reconsider and withdrawal of this rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

Paragraph 9 of the Office Action rejects claims 1-3, 5, 6, 8, and 10-14 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,740,392 to Brennan ("Brennan") in view of U.S. Patent 6,442,674 to Lee et al. ("Lee"). For at least the following reasons, Applicants respectfully request the Examiner reconsider and withdraw the rejection.

Claim 1 recites "a plurality of mappers for receiving instructions of an instruction set, each mapper for mapping an instruction of said instruction set to a predetermined instruction width format (PIWF) configuration." Applicants respectfully submit that Brennan does not teach or suggest the recited "plurality of mappers." Rather, Brennan appears to describe a system in which "length decoders...perform length decoding of 00H and 0FH-mapped instructions" (see col. 7, lines 9-11). According to Brennan, length decoders merely determine the length of already mapped instructions (see col. 7, lines 1-5). However, the length decoders disclosed in Brennan do no mapping of their own. Consequently, Applicants respectfully assert that the disclosed length decoders cannot be considered analogous to the "plurality of mappers" recited in claim 1.

Applicants respectfully submit that the disclosure of Lee is not sufficient to overcome the deficiencies of Brennan with regard to a "plurality of mappers." Accordingly, Applicants respectfully request that the Examiner review and withdraw the rejection of claim 1, and its dependent claims 2-3, under 35 U.S.C. § 103(a) as being unpatentable over Brennan in view of Lee set forth in paragraph 9 of the Office Action.

Claim 5 recites "mapping each instruction of said instruction set to a corresponding PIWF configuration." For the reasons mentioned above, Brennan does not teach or suggest any method for mapping an instruction set to a predetermined instruction width format (PIWF). Further, the teachings of Lee are not sufficient to overcome the deficiencies of Brennan. Accordingly, Applicants respectfully request that the Examiner review and withdraw the rejection of claim 5, and its dependent claim 6, under 35 U.S.C. § 103(a) as being unpatentable over Brennan in view of Lee set forth in paragraph 9 of the Office Action.

Claim 8 recites "a plurality of mappers for mapping a plurality of instructions of an instruction set to predetermined instruction width format (PIWF) configurations." For at least the reasons given above, Brennan does not teach or suggest a "plurality of mappers." Further as noted above, the teachings of Lee are not sufficient to overcome the deficiencies of Brennan with regard to a "plurality of mappers." Accordingly, Applicants respectfully request that the Examiner review and withdraw the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Brennan in view of Lee set forth in paragraph 9 of the Office Action.

Claim 10 recites "a plurality of mappers for receiving instructions of an instruction set, each mapper for mapping an instruction of said instruction set to a predetermined instruction width format (PIWF)." For at least the reasons given above, Brennan does not teach or suggest a "plurality of mappers." Further as noted above, the teachings of Lee are not sufficient to overcome the deficiencies of Brennan with regard to a "plurality of mappers." Accordingly, Applicants respectfully request that the Examiner review and withdraw the rejection of claim 10, and its dependent claims 11-14, under 35 U.S.C. § 103(a) as being unpatentable over Brennan in view of Lee set forth in paragraph 9 of the Office Action.

Paragraph 21 of the Office Action rejects claims 15-20 under 35 U.S.C. § 103(a) as being unpatentable over Brennan in view of Lee in view of Publication "Design A Java Microprocessor Core Using FPGA Technology, IEEE 1998" by Chang et al. ("Chang"). Claims 15-20 have been canceled, thereby rendering the rejections thereto moot. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection set forth in paragraph 21 of the Office Action.

New Claims 21-29

Applicants have added new claims 21-29. New claims 21 and 28 are independent claims. For the reasons mentioned above, independent claims 21 and 28 are believed to be patentable. New claims 22-26 depend from claim 21. New claim 29 depends from claim 28. These claims are also believed to be patentable for the reasons mentioned above. Consideration and allowance of new claims 21-29 are respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.
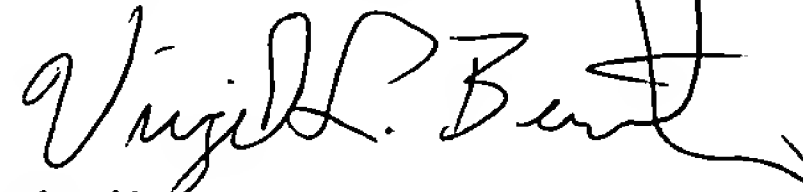
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Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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